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EXAMINER	
CURS, NATHAN M	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,213	MISHRA ET AL.	
	Examiner	Art Unit	
	NATHAN M. CURS	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-10,12-15,17-20,22-25 and 27-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-10, 12-15, 17-20, 22-25 and 27-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Allowability Withdrawn

1. The indicated allowability of claim 11 is withdrawn in view of the newly discovered reference(s) to Lee et al. ("Lee") (US Patent Application Publication No. 2004/0165537).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 4-10, 12-15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (US Patent Application Publication No. 2003/0198471) in view of Westberg (US Patent Application Publication No. 2003/0198226) and further in view of Lee (US Patent Application Publication No. 2004/0165537).

Regarding claim 1, Ovadia discloses a method, comprising: slicing a block of data into a plurality of data slices (fig. 2 and paragraph 0026, where assembling stored data packets into different IP payloads reads on slicing a block of data into a plurality of data slices); appending a slice header to each of the plurality of data slices (fig. 4A and paragraph 0048, where the IP header is for the IP payload); and scheduling the plurality of data slices for transmission onto an optical switching network during fixed time slots

(paragraph 0027, where a reserved time slot is a “fixed” time slot), wherein the block of data comprises a data stream (paragraph 0026, where packets in route to a common destination read on a data stream). Ovadia does not disclose that the IP headers each include a fragment identifier (“ID”) indicating an order of each of the plurality of data slices and a data stream ID identifying the data stream from a plurality other data streams. However, Westberg discloses a packet header that includes a fragment identifier (“ID”) indicating an order of each of the plurality of data slices and a data stream ID identifying the data stream from a plurality other data streams (paragraphs 0017-0018, where the CID reads on a data stream ID and the sequence information reads on a fragment identifier). It would have been obvious to one of ordinary skill in the art at the time of the invention to use CID and sequence information into the headers of Ovadia so that packets of a data stream could be quickly forwarded to a destination without intermediate reassembly, with the reassembly occurring at the destination itself.

Also, the combination of Ovadia and Westberg discloses establishing an optical route through an optical burst switching network using GMPLS (Ovadia: paragraph 0029, the GMPLS routing establishing the network as an optical burst switching GMPLS network), but does not disclose establishing optical paths including executing a Resource Reservation Protocol--Traffic Engineering ("RSVP-TE") signaling protocol, wherein the RSVP-TE signaling protocol includes a hybrid optical bursts switching ("OBS") network extension. Lee discloses RSVP-TE with GMPLS extensions as conventional for path setup, with an additional RSVP-TE object for excluding certain

nodes and resources (paragraphs 0001, 0002 and 0020). Since Ovadia already discloses establishing optical paths in an optical burst switching network using GMPLS, one of ordinary skill in the art at the time of the invention could have used the RSVP-TE with GMPLS extensions for the optical burst switching GMPLS network (thus making the GMPLS extensions optical burst switching network extension, which reads on the language "hybrid object bursts switching network extension"), and the XRO object, for set up of optical burst switching network paths in the combination, and the results would have been predictable; namely, the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object would allow path setup that explicitly includes some nodes and resources in the optical burst switching GMPLS network, while explicitly excluding some nodes and resources. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the RSVP-TE with GMPLS extensions for the optical burst switching GMPLS network (thus making the GMPLS extensions optical burst switching network extension, which reads on the language "hybrid object bursts switching network extension"), and the XRO object, for set up of optical burst switching network paths in the combination, for the predictable result of the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object allowing path setup that explicitly includes some nodes and resources in the optical burst switching GMPLS network, while explicitly excluding some nodes and resources.

Regarding claim 2, the combination of Ovadia, Westberg and Lee discloses the method of claim 1 wherein the block of data comprises a data stream received from

another network and which is buffered at an edge node of the optical switching network (Ovadia: fig. 2 and paragraphs 0023-0026 where the LAN is another network, and where the stored packets in the ingress (edge) node are buffered packets).

Regarding claim 4, the combination of Ovadia, Westberg and Lee discloses the method of claim 2, further comprising: transmitting the plurality of data slices onto the optical switching network as an optical burst (Ovadia: paragraph 0029), the optical burst including fixed length cells containing the plurality of data slices with the slice headers appended thereto (Ovadia: fig. 4A and paragraph 0048 in light of paragraph 0026, where the optical burst payload reads on fixed length cells containing the plurality of data slices with the slice headers).

Regarding claim 5, the combination of Ovadia, Westberg and Lee discloses the method of claim 4 wherein each of the fixed length cells includes N data slices of the plurality of data slices, where N is a whole number greater than one (Ovadia: paragraph 0026, where the burst includes a plurality of packets, where a plurality of packets reads on greater than one packet).

Regarding claim 6, the combination of Ovadia, Westberg and Lee discloses the method of claim 4, further comprising appending a burst header to a first one of the plurality of data slices (Ovadia: fig. 2 element 25 and paragraph 0029, where sending the burst label and payload in the same time slot reads on appending a burst header to a data slice of the payload).

Regarding claim 7, the combination of Ovadia, Westberg and Lee discloses the method of claim 2 wherein scheduling each of the plurality of data slices for

transmission onto an optical switching network comprises scheduling the plurality of data slices into an optical burst (Ovadia: paragraph 0026), the plurality of data slices to be reassembled via the slice headers (Westberg: paragraphs 0017 and 0018, as applicable in the combination). The combination as described above does not disclose scheduling data slice into multiple optical bursts. However, considering that Ovadia schedules bursts into time slots (paragraph 0029), one of ordinary skill in the art at the time of the invention could have used multiple bursts to transmit a long data stream of packets that exceeds the size of one time slot, and the results would have been predictable; namely, the data stream would be carried using multiple bursts and reassembled at the destination once all the bursts have arrived. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use multiple bursts to transmit a data stream of packets that exceeds the size of one time slot for the predictable result of carrying the data stream using multiple bursts to be reassembled at the destination once all the bursts have arrived.

Regarding claim 8, the combination of Ovadia, Westberg and Lee discloses the method of claim 7 wherein each of the plurality of optical bursts are transmitted on different carrier wavelengths (Ovadia: col. 3, lines 47-56 and col. 4, lines 25-36).

Regarding claim 9, the combination of Ovadia, Westberg and Lee discloses the method of claim 8 wherein the fixed time slots are of constant length throughout the optical switching network for optical bursts transmitted on a single one of the carrier wavelengths (Ovadia: paragraph, where the TDM slots read on fixed time slots of constant length per wavelength), but does not disclose that the time slot vary in length

between the different carrier wavelengths. However, Ovadia discloses reserving TDM time slots for optical bursts across multiple wavelengths (paragraph 0027). It would have been obvious to one of ordinary skill in the art at the time of the invention to use different TDM time slot sizes for different wavelengths, so that optical bursts of different sizes are assigned to TDM time slots of different sizes for the different wavelengths, correlating optical burst sizes with TDM time slot sizes to increase the efficiency of using TDM time slots for different size optical bursts.

Regarding claim 10, the combination of Ovadia, Westberg and Lee discloses the method of claim 1, wherein establishing the optical paths through the optical switching network further comprises: establishing the optical paths through the optical network prior to scheduling the plurality of data slices for transmission, wherein establishing the optical paths and scheduling the plurality of data slices are independent of each other (Ovadia: paragraph 0029, where the dynamic routing protocol establishes an optical path through the network from ingress to egress, before the ingress node starts transmitting burst payloads).

Regarding claim 12, Ovadia discloses a processor-readable storage that stores instructions, which when executed by a processor, will cause the processor to perform operations (fig. 2 and paragraphs 0023-0029, where the ingress switching node is a machine and where the node, being a data processing node, inherently has some sort of stored software or firmware instructions that define the data processing functionality of the node) comprising: slicing data blocks into data slices (fig. 2 and paragraph 0026, where assembling stored data packets into different IP payloads reads on slicing blocks

of data into data slices); generating slice headers to append to each of the data slices (fig. 4A and paragraph 0048, where the IP header is for the IP payload); and scheduling the data slices for transmission onto an optical switching network within optical bursts (paragraph 0027, where each IP payload is within an optical burst payload), the optical bursts formed of fixed length optical cells (fig. 4A and paragraph 0048, where the predefined sections of the optical burst payload – elements 40-44 – read on fixed length cells that make up the burst payload). Ovadia does not disclose that each of the slice headers includes a fragment ID identifying an order of the appended data slice and a data stream ID identifying one of the data blocks from which the appended data slice was sliced. However, Westberg discloses a packet header that includes a fragment identifier ("ID") indicating an order of each of the plurality of data slices and a data stream ID identifying the data stream from a plurality other data streams (paragraphs 0017-0018, where the CID reads on a data stream ID and the sequence information reads on a fragment identifier). It would have been obvious to one of ordinary skill in the art at the time of the invention to use CID and sequence information into the headers of Ovadia so that packets of a data stream could be quickly forwarded to a destination without intermediate reassembly, with the reassembly occurring at the destination itself.

Also, the combination of Ovadia and Westberg discloses establishing an optical route through an optical burst switching network using GMPLS (Ovadia: paragraph 0029, the GMPLS routing establishing the network as an optical burst switching GMPLS network), but does not disclose establishing optical paths including executing a

Resource Reservation Protocol--Traffic Engineering ("RSVP-TE") signaling protocol, wherein the RSVP-TE signaling protocol includes a hybrid optical bursts switching ("OBS") network extension. Lee discloses RSVP-TE with GMPLS extensions as conventional for path setup, with an additional RSVP-TE object for excluding certain nodes and resources (paragraphs 0001, 0002 and 0020). Since Ovadia already discloses establishing optical paths in an optical burst switching network using GMPLS, one of ordinary skill in the art at the time of the invention could have used the RSVP-TE with GMPLS extensions for the optical burst switching GMPLS network (thus making the GMPLS extensions optical burst switching network extension, which reads on the language “hybrid object bursts switching network extension"), and the XRO object, for set up of optical burst switching network paths in the combination, and the results would have been predictable; namely, the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object would allow path setup that explicitly includes some nodes and resources in the optical burst switching GMPLS network, while explicitly excluding some nodes and resources. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the RSVP-TE with GMPLS extensions for the optical burst switching GMPLS network (thus making the GMPLS extensions optical burst switching network extension, which reads on the language “hybrid object bursts switching network extension"), and the XRO object, for set up of optical burst switching network paths in the combination, for the predictable result of the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object allowing path setup that explicitly includes some nodes and resources in the

optical burst switching GMPLS network, while explicitly excluding some nodes and resources.

Regarding claim 13, the combination of Ovadia, Westberg and Lee discloses the processor-readable storage of claim 12 wherein scheduling the data slices is independent of establishing a path across the optical switching network (Ovadia: paragraph 0029, where the dynamic routing protocol establishes an optical path through the network from ingress to egress, before the ingress node starts transmitting burst payloads).

Regarding claim 14, the combination of Ovadia, Westberg and Lee discloses the processor-readable storage of claim 13, further containing instructions, which when executed by the processor, will cause the processor to perform further operations, comprising buffering data streams received from another network to generate the data blocks (Ovadia: fig. 2 and paragraphs 0023-0026, where the LAN is another network, stored packets are buffered packets, and where the plurality of received data packets read on a plurality of data streams).

Regarding claim 15, the combination of Ovadia, Westberg and Lee discloses the processor-readable storage of claim 14, but as described above does not disclose scheduling the data slices for transmission comprises scheduling the data slices from multiple ones of the data streams into one of the optical bursts based on a scheduling algorithm. However, since the teaching Westberg enables (paragraphs 0017-0018), One of ordinary skill in the art at the time of the invention could have scheduled data slices from multiple data streams into one of the optical bursts, and the results would

have been predictable; namely, the data slices could be scheduled quickly without regard to original order, since the fragment IDs and data stream ID allow the order of slice to be reconstructed at the destination end. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to schedule data slices from multiple data streams into one of the optical bursts, for the predictable result of quickly scheduling data slices without regard to original order, using fragment IDs and data stream ID at the destination end to reconstruct the order.

Regarding claim 17, the combination of Ovadia, Westberg and Lee discloses the processor-readable storage of claim 12 wherein scheduling the data slices for transmission comprises scheduling a set number of the data slices into each of a first subset of the fixed length optical cells to be transmitted on a first carrier wavelength and scheduling a different number of the data slices into each of a second subset of the fixed length optical cells to be transmitted on a second carrier wavelength (Ovadia: paragraph 0022, for plural optical burst payloads per different wavelength, each burst payload containing plural data slices).

Regarding claim 18, the combination of Ovadia, Westberg and Lee discloses the processor-readable storage of claim 12, further containing instructions, which when executed by the machine, will cause the processor to perform further operations, comprising: generating burst headers for each of the optical bursts (Ovadia: fig. 4B and paragraph 0039); and appending one of the burst headers to a first one of the data slices in each of the optical bursts (Ovadia: fig. 2 element 25 and paragraph 0029,

where sending the burst label and payload in the same time slot reads on appending a burst header to a data slice of the payload).

4. Claims 19, 20 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson (US Patent No. 5477364) in view of Lee (US Patent Application Publication No. 2004/0165537).

Regarding claim 19, Pearson discloses an edge node of an optical switching network (fig. 1A and col. 2, line 63 to col. 3, line 23, where the transmitter node reads on an edge node), comprising: a stream slicer to slice a data block into data slices (fig. 2 and col. 2, line 63 to col. 3, line 16, the means for filling time slices with portions of the data); a header pre-append block communicatively coupled to receive the data slices from the stream slicer and to append a slice header to each of the data slices (fig. 2, the means for appending element 6 to element 7 and col. 2, lines 63 to col. 3, line 16); a scheduler coupled to schedule the data slices into fixed length time slots (col. 1, lines 31-35 and fig. 3 and col. 3, lines 28-34, the means for assembling the high level cell filled with lower level cells, where filling the high level cell with a string of lower level cells reads on scheduling the lower level cells into fixed time slots); and a burst transmit block coupled to generate an optical burst for transmission onto the optical switching network, the optical burst to include the data slices with the appended slice headers (fig. 3 and col. 3, lines 28-34, the means for transmitting the optical bursts onto the network), wherein the burst transmit block is further coupled to generate the optical burst as a series of fixed length optical cells, each of the optical cells containing a fixed number of

the data slices and appended slice headers (fig. 3 and col. 3, lines 28-34, where the means for transmitting the optical bursts onto the network transmits the high level cell with a string of lower level cells, which reads on an optical burst containing fixed length optical cells with each fixed length optical cell having a data slice and header).

Also, the Pearson discloses a simple network embodiment but also disclose that the optical switching network is applicable a wide range of network topologies including routing data to a large number of receivers (col. 2 lines 56-62), and discloses that the burst transmit block is further coupled to generate optical bursts through an established optical path through the optical switching network (fig. 1A, where the physical network topology reads on established paths), but does not disclose that the established optical path includes a path defined by the execution of a Resource Reservation Protocol--Traffic Engineering ("RSVP-TE") signaling protocol, wherein the RSVP-TE signaling protocol includes a hybrid optical bursts switching ("OBS") network extension. Lee discloses RSVP-TE with GMPLS extensions as conventional for path setup in an optical switching network, with an additional RSVP-TE object for excluding certain nodes and resources (paragraphs 0001, 0002 and 0020). One of ordinary skill in the art at the time of the invention could have established paths in using RSVP-TE with GMPLS extensions in a complex optical burst network of Pearson (thus making the GMPLS extensions optical burst switching network extensions, which reads on the language “hybrid object bursts switching network extension"), and using the XRO object, and the results would have been predictable; namely, RSVP-TE with GMPLS optical burst switching network extensions and the XRO object would allow path setup that explicitly

include some nodes while excluding some other nodes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to establish paths using RSVP-TE with GMPLS extensions in a complex optical burst network of Pearson, and using the XRO object, for the predictable result of the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object allowing path setup that explicitly include some nodes while excluding some other nodes.

Regarding claim 20, the combination of Pearson and Lee discloses the edge node of claim 19 wherein the scheduler schedules the data slices independently of a signaling protocol for establishing paths across the optical switching network (Pearson: col. 3 lines 35-43, where a call setup up protocol is separate from an actual call duration).

Regarding claim 22, the combination of Pearson and Lee discloses the edge node of claim 19 wherein the scheduler is coupled to schedule additional data slices into additional optical bursts according to a scheduling algorithm for transmission on different carrier wavelengths through the optical switching network (Pearson: fig. 3 and col. 3 lines 23-34 for additional and/or future calls/transmissions in light of col. 1 lines 45-48 for optical bursts of different wavelengths).

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson (US Patent No. 5477364) in view of Lee (US Patent Application Publication No. 2004/0165537) as applied to claims 19, 20 and 22 above, and further in view of Ovadia (US Patent Application Publication No. 2003/0198471).

Regarding claim 23, the combination of Pearson and Lee discloses the edge node of claim 19, but does not disclose a buffer communicatively coupled to the stream slicer, the buffer to receive data streams from another network and buffer the data streams as the data blocks. Ovadia discloses a stream slicer to slice data streams into data slices (fig. 2 and paragraph 0026, where the means for assembling stored data packets into different IP payloads reads on a slicer slicing a stream of data into a plurality of data slices); a header pre-append block to append a slice header to each of the data slices (fig. 4A and paragraph 0048, the means for appending the IP header with the IP payload); and discloses OEO circuitry and a buffer at an ingress node, to buffer received signals before sending them as optical bursts across the network (paragraph 0016). It would have been obvious to one of ordinary skill in the art at the time of the invention to use OEO circuitry and a buffer at a source node of the combination, to provide the benefit of data signal transmission scheduling control.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson (US Patent No. 5477364) in view of Lee (US Patent Application Publication No. 2004/0165537) as applied to claims 19, 20 and 22 above, and further in view of Westberg (US Patent Application Publication No. 2003/0198226).

Regarding claim 24, the combination of Pearson and Lee discloses the edge node of claim 19, but does not disclose that the header pre-append block is further coupled to generate a fragment identifier ("ID") and a data stream ID for each of the data slices, the slice header comprising the fragment ID and the stream ID. Westberg

discloses a packet header that includes a fragment identifier ("ID") indicating an order of each of the plurality of data slices and a data stream ID identifying the data stream from a plurality other data streams (paragraphs 0017-0018, where the CID reads on a data stream ID and the sequence information reads on a fragment identifier). It would have been obvious to one of ordinary skill in the art at the time of the invention to use CID and sequence information into the headers of the combination so that packets of a data stream could be quickly forwarded to a destination node without intermediate reassembly, with the reassembly occurring at the destination node itself.

7. Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (US Patent Application Publication No. 2003/0198471) in view of Lee (US Patent Application Publication No. 2004/0165537).

Regarding claim 25, Ovadia discloses a system, comprising: an edge node to receive data streams from a first network (fig. 1, the Ingress Switching Node and paragraphs 0014-0015), the edge node comprising: a stream slicer to slice the data streams into data slices (fig. 2 and paragraph 0026, where the means for assembling stored data packets into different IP payloads reads on a slicer slicing a stream of data into a plurality of data slices); a header pre-append block to append a slice header to each of the data slices (fig. 4A and paragraph 0048, the means for appending the IP header with the IP payload); a scheduler to schedule the data slices for transmission within fixed length optical cells (fig. 4A and paragraphs 0026 and 0048, the means for scheduling the data slices into predefined sections of the optical burst payload, where

the fixed length cells in the burst payload read on fixed length optical cells); and a burst transmit block to generate optical bursts containing the fixed length optical cells (fig. 4A and paragraphs 0026 and 0048, the means for forming the optical payload), the optical bursts to be transmitted during fixed time slots (paragraph 0027, where a reserved time slot is a “fixed” time slot); and an egress node optically coupled to receive the optical bursts and to deliver the data streams to a second network (fig. 1 element 18 and paragraph 0015); and a plurality of switching nodes optically coupled between the edge node and the egress node to route the data streams from the edge node to the egress node (fig. 1 and paragraph 0015, the core switching nodes), wherein the scheduler schedules the data slices independently of a signaling protocol used to establish a path across the plurality of switching nodes (Ovadia: paragraph 0029, where the dynamic routing protocol establishes an optical path through the network from ingress to egress, before the ingress node starts transmitting burst payloads).

Also, the combination of Ovadia and Westberg discloses a management station establishing an optical route through an optical burst switching network using GMPLS (Ovadia: paragraph 0029, where the network controller reads on a management station, and the GMPLS routing establishing the network as an optical burst switching GMPLS network), but does not disclose establishing optical paths including executing a Resource Reservation Protocol--Traffic Engineering ("RSVP-TE") signaling protocol, wherein the RSVP-TE signaling protocol includes a hybrid optical bursts switching ("OBS") network extension. Lee discloses RSVP-TE with GMPLS extensions as conventional for path setup, with an additional RSVP-TE object for excluding certain

nodes and resources (paragraphs 0001, 0002 and 0020). Since Ovadia already discloses establishing optical paths in an optical burst switching network using GMPLS, one of ordinary skill in the art at the time of the invention could have used the RSVP-TE with GMPLS extensions for the optical burst switching GMPLS network (thus making the GMPLS extensions optical burst switching network extension, which reads on the language “hybrid object bursts switching network extension"), and the XRO object, for set up of optical burst switching network paths in the combination, and the results would have been predictable; namely, the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object would allow path setup that explicitly includes some nodes and resources in the optical burst switching GMPLS network, while explicitly excluding some nodes and resources. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the RSVP-TE with GMPLS extensions for the optical burst switching GMPLS network (thus making the GMPLS extensions optical burst switching network extension, which reads on the language “hybrid object bursts switching network extension"), and the XRO object, for set up of optical burst switching network paths in the combination, for the predictable result of the RSVP-TE with GMPLS optical burst switching network extensions and the XRO object allowing path setup that explicitly includes some nodes and resources in the optical burst switching GMPLS network, while explicitly excluding some nodes and resources.

Regarding claim 27, the combination of Ovadia and Lee discloses the system of claim 25 wherein the scheduler is further coupled to schedule the data slices from one

of the data streams into an optical burst according to a scheduling algorithm for transmission to the egress node (Ovadia: paragraph 0026), and discloses transmitting optical bursts on a different carrier wavelengths (Ovadia: paragraphs 0022 and 0027). Ovadia does not disclose scheduling data slices from one of the data streams into multiple optical bursts each transmitted on a different wavelength. However, considering that Ovadia schedules bursts onto different wavelengths (paragraph 0022) and into time slots (paragraph 0029), one of ordinary skill in the art at the time of the invention could have used multiple bursts on different wavelengths to transmit a long data stream of packets that exceeds the size of one time slot, and the results would have been predictable; namely, the data stream would be spread out across multiple bursts. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use multiple bursts on different wavelengths to transmit a data stream of packets that exceeds the size of one time slot for the predictable result of spreading the data stream across multiple bursts.

8. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (US Patent Application Publication No. 2003/0198471) in view of Lee (US Patent Application Publication No. 2004/0165537) as applied to claims 25 and 27 above, and further in view of Westberg (US Patent Application Publication No. 2003/0198226).

Regarding claim 28, the combination of Ovadia and Lee discloses the system of claim 25, and discloses a destination egress node (Ovadia: fig. 1 element 18 and

paragraph 0015 and 0018), but does not disclose that the header pre-append block is further configured to generate a fragment identifier ("ID") and a data stream ID for each of the data slices, and wherein the slice header comprises the fragment ID and the stream ID. Westberg discloses a packet header that includes a fragment identifier ("ID") indicating an order of each of the plurality of data slices and a data stream ID identifying the data stream from a plurality other data streams (paragraphs 0017-0018, where the CID reads on a data stream ID and the sequence information reads on a fragment identifier). It would have been obvious to one of ordinary skill in the art at the time of the invention to use CID and sequence information into the headers of Ovadia so that packets of a data stream could be quickly forwarded to an egress destination node without intermediate reassembly, with the reassembly occurring at the egress destination node itself.

Regarding claim 29, the combination of Ovadia, Lee and Westberg discloses the system of claim 28 wherein the egress node is further configured to reassemble the data slices of one of the data streams prior to delivering the one of the data streams to the second network, if the data slices arrive at the egress node out of order (Ovadia: fig. 1 element 18 and paragraphs 0015 and 0017, and Westberg: paragraphs 0017-0018, as applicable in the combination where the egress node is the destination node).

Response to Arguments

9. Applicant’s arguments of 6 November 2008, with respect to the rejections under 35 USC § 112-1st paragraph and 35 USC § 101 have been fully considered and are persuasive. The previous respective rejections have been withdrawn.

10. Applicant's arguments of 6 November 2008, with respect to the rejections under 35 USC § 102 and 35 USC § 103 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN M. CURS whose telephone number is (571)272-3028. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Ken Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/NATHAN M CURS/

Examiner, Art Unit 2613